# Q & A
# to Implement Countermeasures to the Novel Coronavirus Infectious Disease (COVID-19) in Waste Treatment and Management
# (29 June 2020)
# (English Version to be Released in July 2020)

Waste treatment and management are crucial backbone activities for our society. This has been especially recognized under increased risks of infection with COVID-19, the novel coronavirus disease, where garbage waste has been disposed of and accumulated every day from households, medical institutions, and offices. In order to protect our waste treatment system, which is realized as the very platform for our daily lives, medical activities, and social economic activities, not to be stopped under the coronavirus situation, we, Ministry of the Environment Government of Japan, have compiled the most relevant questions and answers pertaining to waste treatment and management by referring to information released from Ministry of Health, Labour and Welfare and also opinions and advise from experts.

This Q&A booklet has been posted in our website as a useful guidance for those who handle and treat garbage waste at households, medical institutions, offices, local municipalities and regional governments, and waste treatment sites, in the aim of infection prevention and control of the novel coronavirus infectious disease. Specific points of requests and of attention and caution for infection prevention are provided in the description. We recommend those to read through and refer to, always.

This Q&A booklet will be updated as necessary for correction and addition to provide and share the most recent information and situation on the novel coronavirus infection.

We appreciate understanding as well as cares and cooperation of you all extended to infection prevention and control of the novel coronavirus infectious disease.

Environmental Regeneration and Material Cycles Bureau
Waste Management Division
Industrial and Hazardous Waste Management Division
Ministry of the Environment

# Questions and Answers
# to Implement Countermeasures to the Novel Coronavirus
# in Waste Treatment and Management
# (As of 29 June 2020)

## 【1. For Households】

### <General Knowledge on the Novel Coronavirus>

Q1-1: What is "the novel coronavirus", and how does it differ from other viruses?

A1-1: The novel coronavirus (SARS-CoV-2) is a type of coronaviruses including those causing normal colds, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS). Among other viruses, coronaviruses are categorized as a type of virus with RNA as genetic information (a single-stranded RNA virus), and has a double membrane made of lipid called "envelope" at the outermost part of a virus particle. Although it cannot reproduce itself, it can replicate by adhering to and entering into cells such as mucous membranes.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

### <Transmission Routes of the Novel Coronavirus Infectious Disease (COVID-19)>

Q1-2: How does human-to-human transmission of COVID-19 occur?

A1-2: Infection of COVID-19 generally takes places via respiratory droplets which are inhaled, or via direct/indirect contacts with other people.

(1) Infection via Respiratory Droplets
When an infected person coughs or sneezes, the viruses within the droplets (saliva and sputum) are released over a short distance to be inhaled through mouths or nostrils of people in the proximity.

(2) Infection via Contacts
When an infected person covers his/her mouth at coughing or sneezing with hands and touching objects with those hands, the viruses on the hands may stick on the surface, then others who touched the same objects can be infected through membranes by touching their mouths or noses afterwards. Possible channels of such transmission include hand straps of trains and buses, PCs, doorknobs, switches, and buttons. It is known that, although the viruses can enter in the mucous membranes, they can only adhere to healthy skin without entering in it. The viruses on the surface of an object will break down over time. However, some viruses may remain infectious for 24-72 hours depending

on materials and types of the surface.

There are high risks of spreading the infection under the following three conditions: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

Even if all three conditions are not met, there are risks associated with congestions and close-range conversations, especially speaking loudly and singing. In addition, vigorous exhalation and exercise with loud voice may have risks of infection.

Currently, the spreads of infections in clusters have occurred usually at live houses, gyms, medical institutions, and restaurants involving reception in downtowns and business areas. Cautions must be taken always; because there are serious concerns pointed out of infections from asymptomatic persons.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<Basic Infection Prevention Measures>**

Q1-3: How can I avoid catching or spreading the coronavirus in daily lives?

A1-3: To prevent infection, general measures against the infectious diseases such as washing your hands with soap, using alcohol-based hand sanitizer gel, and ventilation are effective. Health management should also be reminded such as getting enough sleep. It is also effective to avoid touching your mouth and nose with your hands before washing or disinfecting your hands, and to measure and record your body temperature regularly.

Handwashing in running water is effective even without soap, because it can rinse off some contamination including viruses, but handwashing with soap is more effective. When washing your hands, it is important to wash your fingertips, between fingers, wrists, and wrinkles carefully where dirt and viruses tend to remain. Using alcohol-based hand sanitizer gel is an alternative to make viruses noninfectious when soap and running water is not available.

Further, it is important to avoid the three Cs: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

In addition, it is effective to avoid unnecessary and non-urgent outings as well as nighttime visits to bustling downtowns, to keep the social distancing with others, and to adequately ventilate homes and offices.

Finally, it is important to avoid infecting not only yourself but also others by wearing a facemask when going out and by keeping "the cough etiquette" even at home.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<General Matters on Waste Related to COVID-19>**

Q1-4: What kind of waste is discharged with the novel coronavirus disease?

A1-4: Households and offices discharge tissues and used facemasks as general waste or industrial waste, which contain respiratory secretions (nasal discharge, sputum, and the like) from infected persons.

**<How to Dispose of Household Garbage ①>**

Q1-5: How should I dispose of waste such as tissues used by people who are infected or suspected of infection with the novel coronavirus?

A1-5: Waste related to the novel coronavirus diseases which is discharged from households and offices should be treated according to the "Guidelines for Measures against New Influenza in Waste Treatment", in the same manner as the waste related to the influenza infection.

Specific prevention measures include: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Household Garbage Disposal (To Prevent Spread and Infection of COVID-19)*
*http://www.env.go.jp/saigai/novel_coronavirus_2020/household_garbage_disposal.pdf*


*(Reference) Appropriate Process of Wastes Related to the Novel Coronavirus Infection Disease (Official Notice)*

*(in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

## <How to Dispose of Household and Office Garbage ②>

Q1-6: Any other cares and cautions be taken concerning garbage disposal?

A1-6: Please note that the amount of household garbage has increased significantly because the vast majority of people has stayed and cared at home to follow the "stay home" policy. This situation has burdened to workers and staff members who are responsible for treating waste. Therefore, please be reminded of the following five manners when disposing of household garbage.

1) Securely tie to seal garbage bags! (See A1-5)

Securely tied garbage bags to prevent garbage to be scattered and make them carried easily and safely.

2) Deflate air inside the garbage bags!

Garbage bags can be carried easily and tidily. Deflated garbage bags do not burst when loaded into garbage trucks.

3) Drain water from kitchen waste!

To cope with increased household garbage under "stay home" situation, this helps to reduce weight and volume of garbage.

4) Try to reduce "everyday garbage"!

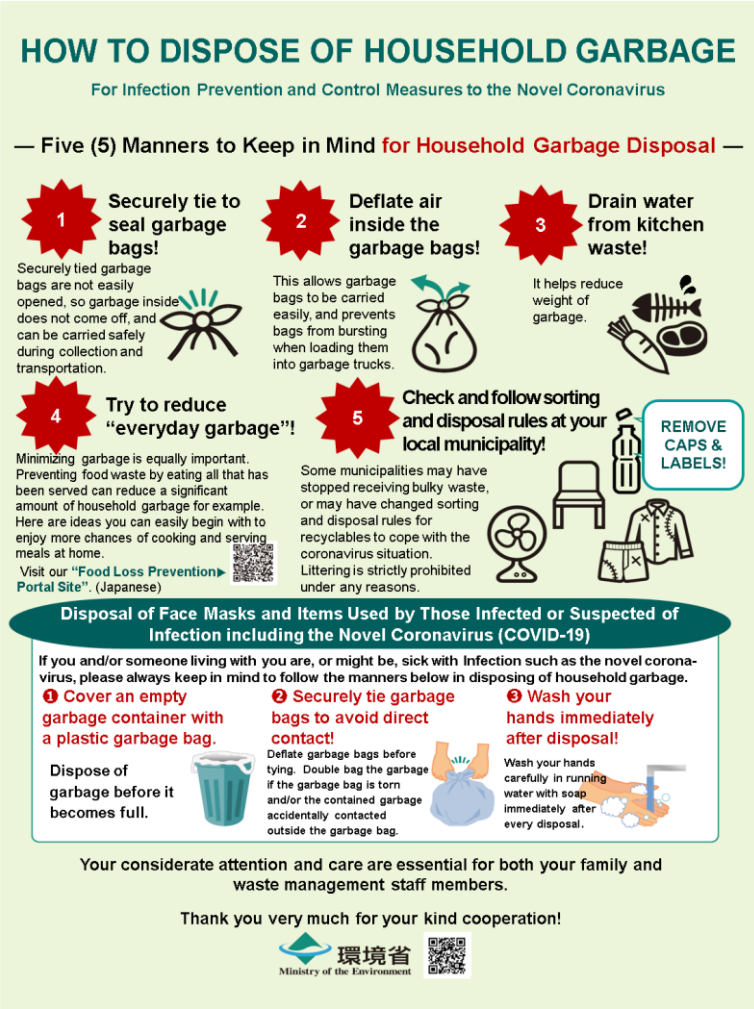
Again, this also allows reducing both weight and volume of garbage.

5) Check and follow the sorting and disposal rules at your local municipality!

Appropriate sorting and disposal of garbage by following disposal rules can minimize infection risks of waste management staff members who treat garbage for you.

*(Reference) How to Dispose of Household Garbage – For Infection Prevention and Control Measures to the Novel Coronavirus –*

*https://www.env.go.jp/en/recycle/index.html*



**<How to Dispose of Household and Office Garbage ③>**

Q1-7: Could any advice be provided on whether or not disinfectant solution such as sodium hypochlorite is effective if diffused over the surface of garbage and/or the surface of garbage bags, in order to protect staff workers from infection of the novel coronaviruses derived of garbage discharged from households and temporary lodging facilities where patients are staying?

A1-7: Disinfection against the novel coronaviruses using sodium hypochlorite and/or alcohol solution has been recognized as effective to a certain degree.

However, disinfectant may not be diffused uniformly over the entire surface of garbage or garbage bags, which may result in incomplete disinfection, and may even cause health hazards or risks to those who actually performed the disinfection. For this reason, disinfectant solution should be used by soaking a towel or a cleaning cloth into the solution, to carefully wipe an item.

Therefore, it is dependent on whether or not it is necessary, to wipe the entire surface of garbage bags using the soaked towel and the like, or to double bag the garbage bags, to sufficiently achieve the same effect, when disinfecting the surface of garbage bags.

Most importantly, infection prevention measures are to be thoroughly implemented among staff workers who handle and treat garbage bags, including adequate use of personal protection equipment such as gloves, and disinfection and/or washing hands.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Guidelines for Measures Against New Influenza (Cross-Ministerial Conference on Measures Against the New Influenza and Avian Influenza) (in Japanese)*
*https://www.cas.go.jp/jp/seisaku/ful/keikaku/pdf/h300621gl_guideline.pdf*

*(Reference) Countermeasures to the Novel Coronavirus: Keep Clean Around Oneself (Ministry of Economy, Trade and Industry, and Ministry of Health, Labour and Welfare) (in Japanese)*
*https://www.meti.go.jp/covid-19/pdf/0327_poster.pdf*

*(Reference) Notes for Households in Which a Family Member Might Have been Infected with the Novel Coronavirus (Japanese Society for Infection Prevention and Control) (in Japanese)*
*http://www.kankyokansen.org/uploads/uploads/files/jsipc/dokyokazoku-chuijikou.pdf*

**<As to Normally Reusable and Recyclable Resource Materials>**

Q1-8: How should laundry items be handled including towels and bed linens used by people, who are infected or might have been infected with the novel coronavirus?

A1-8: Please wash them as usual using laundry detergent, and dry them completely. Gloves and facemasks should be worn while handling. Reusable items such as linen should not be wasted, as long as those preventive measures are applied. Please reference through at least the two webpages from Ministry of Health, Labour and Welfare, listed below for appropriate prevention:

*(Reference Websites from Ministry of Health, Labour and Welfare) Cautions at Home: 8 Points to be Reminded (in Japanese)*

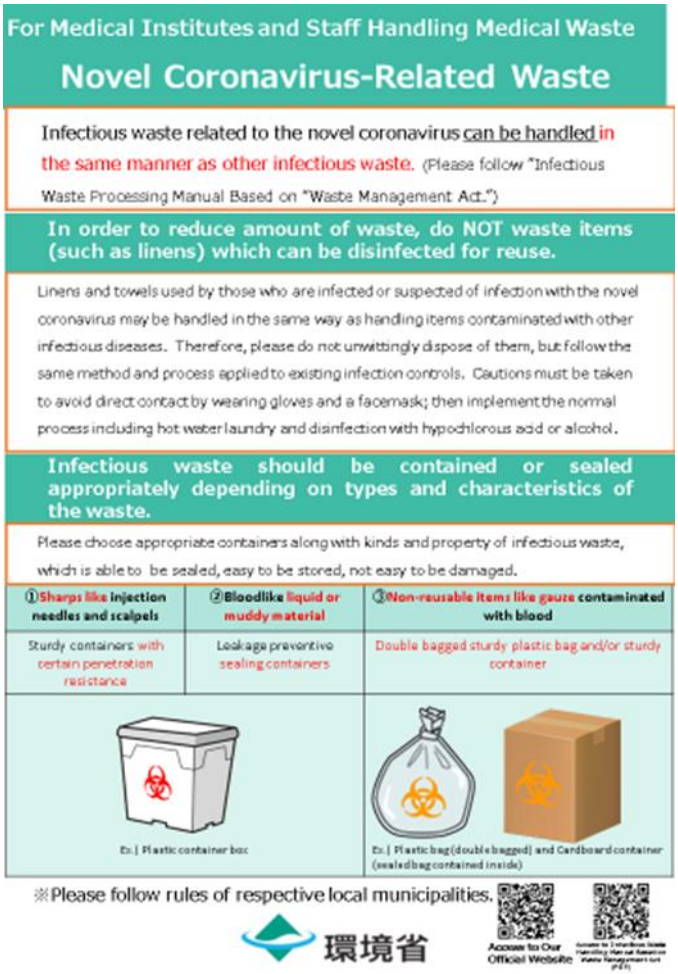
*https://www.mhlw.go.jp/content/10900000/000601721.pdf*

*(Reference) Temporary Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*(Reference) For Medical Institutes and Staff Handling Medical Waste: The Novel Coronavirus-Related Waste*

*https://www.env.go.jp/en/recycle/index.html*




*(Reference) Facilitated Waste Disposal Process Related to the Novel Coronavirus Infection, under the State of Emergency (Official Notice) (in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

## 【2. For Medical Institutions(*)】

*(*)Medical institutions include hospitals, medical clinics (public health centers and blood services centers are categorized as medical clinics), sanitation inspection centers, nursing care homes for elderly, maternity/midwife clinics, animal clinics and care facilities, and examination and research institutes for animals (limited only to those pertaining to medicine, dentistry, pharmacy, and veterinary medicine).*

*(Reference: Waste Management and Public Cleansing Act, Enforcement Order, Appendix 1, Section 4, and Enforcement Regulation, Article 1, Section 7.)*

*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00004.html*

This section focuses on questions and answers related to waste discharged from medical institutions. Questions and answers which are not mentioned in this section may be found in the website page for more technical contents related by Ministry of Health, Labour and Welfare.
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00004.html

**<General matters on Waste Related to COVID-19>**

Q2-1: What kind of waste is discharged with the novel coronavirus disease?

A2-1: Medical institutions and inspection institutes discharge medical equipment and/or materials as infectious waste which are used for diagnoses, treatment, and inspection related to the novel coronavirus disease.

**<Waste from Patients with Mild or No Symptoms Staying at Temporary Lodging Facilities>**

Q2-2: How should waste discharged from temporary lodging facilities be treated where patients stay with mild or no symptoms of the novel coronavirus disease?

A2-2: Since the facility mentioned in this question is not a place for medical or care practices, it is not a facility that discharges infectious waste defined according to the Waste Management and Public Cleaning Act, under which the waste is not required to be treated as infectious waste. However, any appropriate measures should still be taken to prevent infection among workers in the facility and also waste treatment business operators.

It is important to thoroughly implement the infection prevention measures illustrated in "Guidelines for Measures Against New Influenza in Waste Treatment" (refer to A5-5 as well). At the same time, please be reminded of the following specific prevention measures: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

Please note that treating all or majority of the waste in accordance with the treatment of infectious waste may rather increase risk of public health, because it would lead to concentration of waste treatment load on the infectious waste treatment facilities, resulting in stagnant of waste disposal processes. Therefore, reasonable treatment is important considering the stable continuation and maintenance of the waste treatment and management system.

*(Reference Websites from Ministry of Health, Labour and Welfare) Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*https://www.mhlw.go.jp/content/000619458.pdf*

*(Reference) To carefully handle Waste from Temporary Lodging Facilities*

*https://www.env.go.jp/en/recycle/index.html*


*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification) (in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

**<How to Dispose Waste from Medical Institutions>**

Q2-3: How should infectious waste be treated which is discharged from medical institutions in relation to the novel coronavirus disease?

A2-3: Infectious Waste related to the novel coronavirus disease discharged from medical institutions should be treated in accordance with the "Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act".

Specifically, when storing infectious waste in an institution, the discharger of medical waste should install a partition in order to prevent the infectious waste from being mixed with other waste, and put perishable waste in the refrigerator. In addition, when discharging, it is necessary to select an appropriate container according to the type and property of the waste, to put and seal the waste in the container, and to clearly indicate that it contains infectious waste.

*(Reference)Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act (in Japanese)*

*https://www.env.go.jp/recycle/kansen-manual1.pdf*

*(Reference) The Novel Coronavirus-related Waste for Medical Institutes and Stuff Handling Medical Waste,*

https://www.env.go.jp/en/recycle/index.html

## For Medical Institutes and Staff Handling Medical Waste

# Novel Coronavirus-Related Waste

Infectious waste related to the novel coronavirus can be handled in the same manner as other infectious waste. (Please follow "Infectious Waste Processing Manual Based on "Waste Management Act.")

### In order to reduce amount of waste, do NOT waste items (such as linens) which can be disinfected for reuse.

Linens and towels used by those who are infected or suspected of infection with the novel coronavirus may be handled in the same way as handling items contaminated with other infectious diseases. Therefore, please do not unwittingly dispose of them, but follow the same method and process applied to existing infection controls. Cautions must be taken to avoid direct contact by wearing gloves and a facemask; then implement the normal process including hot water laundry and disinfection with hypochlorous acid or alcohol.

### Infectious waste should be contained or sealed appropriately depending on types and characteristics of the waste.

Please choose appropriate containers along with kinds and property of infectious waste, which is able to be sealed, easy to be stored, not easy to be damaged.

| ①Sharps like injection needles and scalpels | ②Bloodlike liquid or muddy material | ③Non-reusable items like gauze contaminated with blood |
|---|---|---|
| Sturdy containers with certain penetration resistance | Leakage preventive sealing containers | Double bagged sturdy plastic bag and/or sturdy container |
|  Ex.) Plastic container box | |  Ex.) Plastic bag (double bagged) and Cardboard container (sealed bag contained inside) |

※Please follow rules of respective local municipalities.

環境省

Access to Our Official Website

Access to Infectious Waste Handling Manual Based on Waste Management Act (PDF)

*(Reference) Appropriate Waste Treatment Related to the Novel Coronavirus Infectious Disease (Official Notification) (in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

## 【3.For Waste Disposal Operators Except Medical Institutions】

### <General Knowledge on the Novel Coronavirus>

Q3-1: What is “the novel coronavirus”, and how does it differ from other viruses?

A3-1: The novel coronavirus（SARS-CoV-2） is a type of coronaviruses including those causing normal colds, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS). Among other viruses, coronaviruses are categorized as a type of virus with RNA as genetic information (a single-stranded RNA virus), and has a double membrane made of lipid called "envelope" at the outermost part of a virus particle. Although it cannot reproduce itself, it can replicate by adhering to and entering into cells such as mucous membranes.

*(Reference Website from Ministry of Health, Labour and Welfare)*
*Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

### <Transmission Routes of the Novel Coronavirus Infectious Disease (COVID-19)>

Q3-2: How does human-to-human transmission of COVID-19 occur?

A3-2: Infection of COVID-19 generally takes places via respiratory droplets which are inhaled, or via direct/indirect contacts with other people.

(1) Infection via Respiratory Droplets

When an infected person coughs or sneezes, the viruses within the droplets (saliva and sputum) are released over a short distance to be inhaled through mouths or nostrils of people in the proximity.

(2) Infection via Contacts

When an infected person covers his/her mouth at coughing or sneezing with hands and touching objects with those hands, the viruses on the hands may stick on the surface, then others who touched the same objects can be infected through membranes by touching their mouths or noses afterwards. Possible channels of such transmission include hand straps of trains and buses, PCs, doorknobs, switches, and buttons. It is known that, although the viruses can enter in the mucous membranes, they can only adhere to healthy skin without entering in it. The viruses on the surface of an object will break down over time. However, some viruses may remain infectious for 24-72 hours depending on materials and types of the surface.

There are high risks of spreading the infection under the following three conditions: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

Even if all three conditions are not met, there are risks associated with congestions and close-range

conversations, especially speaking loudly and singing. In addition, vigorous exhalation and exercise with loud voice may have risks of infection.

Currently, the spreads of infections in clusters have occurred usually at live houses, gyms, medical institutions, and restaurants involving reception in downtowns and business areas. Cautions must be taken always; because there are serious concerns pointed out of infections from asymptomatic persons.

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*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<Basic Infection Prevention Measures>**

Q3-3: How can I avoid catching or spreading the coronavirus in daily lives?

A3-3: To prevent infection, general measures against the infectious diseases such as washing your hands with soap, using alcohol-based hand sanitizer gel, and ventilation are effective. Health management should also be reminded such as getting enough sleep. It is also effective to avoid touching your mouth and nose with your hands before washing or disinfecting your hands, and to measure and record your body temperature regularly.

Handwashing in running water is effective even without soap, because it can rinse off some contamination including viruses, but handwashing with soap is more effective. When washing your hands, it is important to wash your fingertips, between fingers, wrists, and wrinkles carefully where dirt and viruses tend to remain. Using alcohol-based hand sanitizer gel is an alternative to make viruses noninfectious when soap and running water is not available.

Further, it is important to avoid the three Cs: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

In addition, it is effective to avoid unnecessary and non-urgent outings as well as nighttime visits to bustling downtowns, to keep the social distancing with others, and to adequately ventilate homes and offices.

Finally, it is important to avoid infecting not only yourself but also others by wearing a facemask when going out and by keeping "the cough etiquette" even at home.

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*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*

*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<General Knowledge on Waste Related to COVID-19>**

Q3-4: What kind of waste is discharged with the novel coronavirus disease?

A3-4: Offices other than medical institutions discharge tissues and used facemasks as general waste or industrial waste, which contain respiratory secretions (nasal discharge, sputum, and the like) from infected persons.

**<How to Dispose of Office Garbage ①>**

Q3-5: How should I dispose of waste such as tissues used by people who are infected or suspected of infection with the novel coronavirus?

A3-5: Waste related to the novel coronavirus diseases which is discharged from offices should be treated according to the "Guidelines for Measures against New Influenza in Waste Treatment", in the same manner as the waste related to the influenza infection.

Specific prevention measures include: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

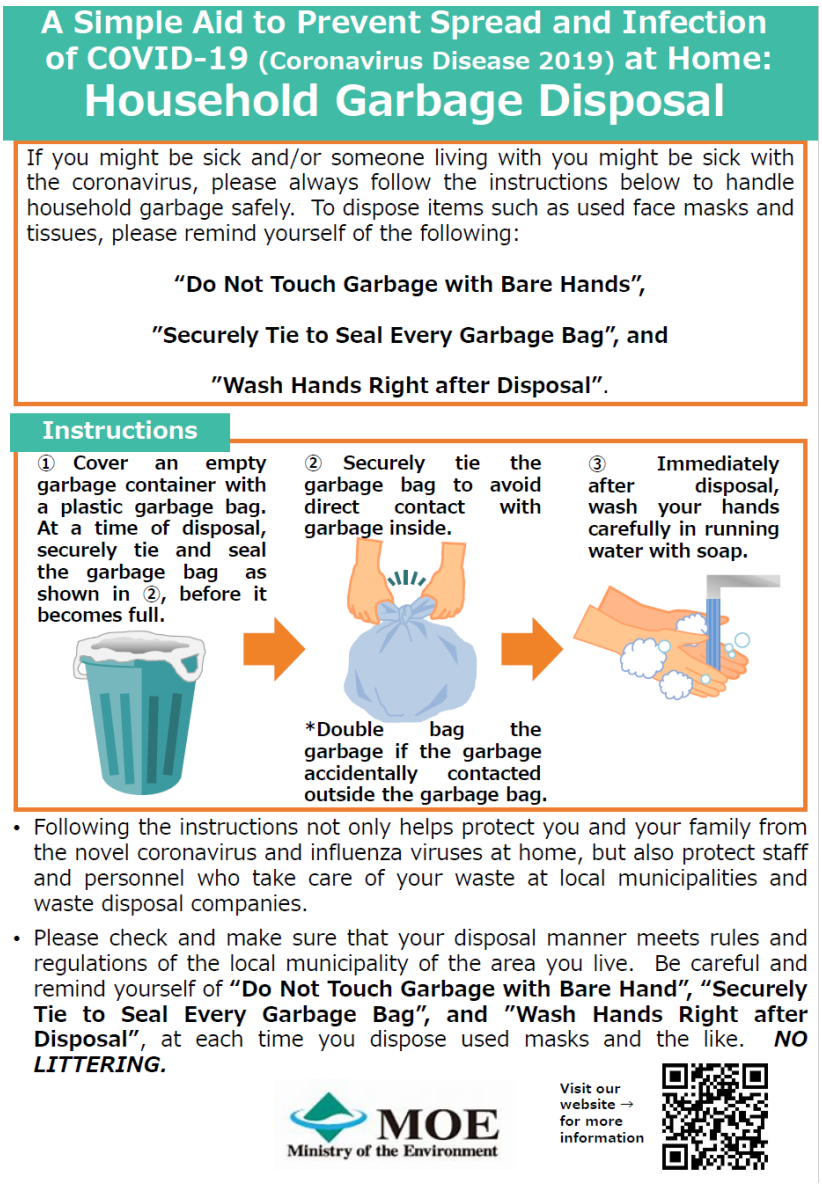
Please also refer to the flyer which illustrates how to dispose household garbage such as facemasks.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*

*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Household Garbage Disposal (To Prevent Spread and Infection of COVID-19)*

*http://www.env.go.jp/saigai/novel_coronavirus_2020/household_garbage_disposal.pdf*




*(Reference) Appropriate Waste Treatment Related to the Novel Coronavirus Infectious Disease (Official Notification) (in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

**<How to Dispose of Office Garbage ②>**

Q3-6: Could any advice be provided on whether or not disinfectant solution such as sodium hypochlorite is effective if diffused over the surface of garbage and/or the surface of garbage bags, in order to protect staff workers from infection of the novel coronaviruses derived of garbage discharged from households and temporary lodging facilities where patients are staying?

A3-6: Disinfection against the novel coronaviruses using sodium hypochlorite and/or alcohol solution has been recognized as effective to a certain degree.

However, disinfectant may not be diffused uniformly over the entire surface of garbage or garbage bags, which may result in incomplete disinfection, and may even cause health hazards or risks to those who actually performed the disinfection. For this reason, disinfectant solution should be used by soaking a towel or a cleaning cloth into the solution, to carefully wipe an item.

Therefore, it is dependent on whether or not it is necessary, to wipe the entire surface of garbage bags using the soaked towel and the like, or to double bag the garbage bags, to sufficiently achieve the same effect, when disinfecting the surface of garbage bags.

Most importantly, infection prevention measures are to be thoroughly implemented among staff workers who handle and treat garbage bags, including adequate use of personal protection equipment such as gloves, and disinfection and/or washing hands.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Guidelines for Measures Against New Influenza (Cross-Ministerial Conference on Measures Against the New Influenza and Avian Influenza) (in Japanese)*
*https://www.cas.go.jp/jp/seisaku/ful/keikaku/pdf/h300621gl_guideline.pdf*

*(Reference) Countermeasures to the Novel Coronavirus: Keep Clean Around Oneself (Ministry of Economy, Trade and Industry, and Ministry of Health, Labour and Welfare) (in Japanese)*
*https://www.meti.go.jp/covid-19/pdf/0327_poster.pdf*

*(Reference) Notes for Households in Which a Family Member Might Have been Infected with the Novel Coronavirus (Japanese Society for Infection Prevention and Control) (in Japanese)*
*http://www.kankyokansen.org/uploads/uploads/files/jsipc/dokyokazoku-chuijikou.pdf*

**<As to Normally Reusable and Recyclable Resource Materials>**

Q3-7: How should laundry items be handled including towels and bed linens used by people, who are infected or might have been infected with the novel coronavirus?

A3-7: Please wash them as usual using laundry detergent, and dry them completely. Gloves and facemasks should be worn while handling. Reusable items such as linen should not be wasted, as long as those preventive measures are applied. Please reference through at least the two webpages from Ministry of Health, Labour and Welfare, listed below for appropriate prevention:

*(Reference Websites from Ministry of Health, Labour and Welfare) Cautions at Home: 8 Points to be Reminded*

*(in Japanese)*

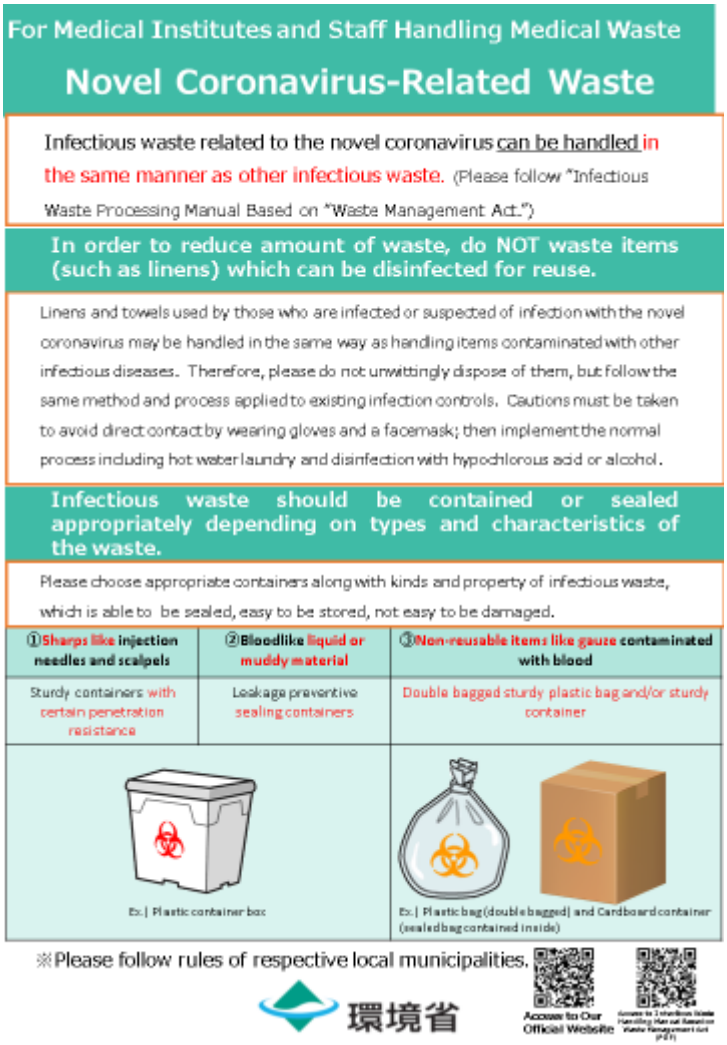
*https://www.mhlw.go.jp/content/10900000/000601721.pdf*

*(Reference) Temporary Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*(Reference) For Medical Institutes and Staff Handling Medical Waste: The Novel Coronavirus-Related Waste*

*https://www.env.go.jp/en/recycle/index.html*




*(Reference) Facilitated Waste Disposal Process Related to the Novel Coronavirus Infection, under the State of Emergency (Official Notice) (in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

**<Waste from Patients with Mild or No Symptoms Staying at Temporary Lodging Facilities>**

Q3-8: How should waste discharged from temporary lodging facilities be treated where patients stay with mild or no symptoms of the novel coronavirus disease?

A3-8: Since the facility mentioned in this question is not a place for medical or care practices, it is not a facility that discharges infectious waste defined according to the Waste Management and Public Cleaning Act, under which the waste is not required to be treated as infectious waste. However, any appropriate measures should still be taken to prevent infection among workers in the facility and also waste treatment business operators.

It is important to thoroughly implement the infection prevention measures illustrated in "Guidelines for Measures Against New Influenza in Waste Treatment" (refer to A5-5 as well). At the same time, please be reminded of the following specific prevention measures: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

Please note that treating all or majority of the waste in accordance with the treatment of infectious waste may rather increase risk of public health, because it would lead to concentration of waste treatment load on the infectious waste treatment facilities, resulting in stagnant of waste disposal processes. Therefore, reasonable treatment is important considering the stable continuation and maintenance of the waste treatment and management system.

*(Reference Websites from Ministry of Health, Labour and Welfare) Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*https://www.mhlw.go.jp/content/000619458.pdf*

*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification)(in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

## 【4. For Local Municipalities and Regional Governments】
### (Including Q & A about Temporary Lodging Facilities (*) for Patients with Mild Symptoms)

*(*) Temporary Lodging facilities are facilities such as accommodations which are coordinated and offered by prefectural governments for patients with mild symptoms of the novel coronavirus to stay for recovery.*

*(Reference) Preparation Notes: Temporary Lodging Facilities for Patients with Mild Symptoms of the Novel Coronavirus; Subjects to be Recuperated at Home; and Measures to be Implemented by Municipalities. Ministry of Health, Labour and Welfare.*
*https://www.mhlw.go.jp/content/000618525.pdf*

**<General Knowledge on the Novel Coronavirus>**

| Q4-1: What is "the novel coronavirus", and how does it differ from other viruses? |
|---|
| A4-1: The novel coronavirus (SARS-CoV-2) is a type of coronaviruses including those causing normal colds, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS). Among other viruses, coronaviruses are categorized as a type of virus with RNA as genetic information (a single-stranded RNA virus), and has a double membrane made of lipid called "envelope" at the outermost part of a virus particle. Although it cannot reproduce itself, it can replicate by adhering to and entering into cells such as mucous membranes.<br><br>*(Reference Website from Ministry of Health, Labour and Welfare)*<br>*Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*<br>*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html* |

**<Transmission Routes of the Novel Coronavirus Infectious Disease (COVID-19)>**

| Q4-2: How does human-to-human transmission of COVID-19 occur? |
|---|
| A4-2: Infection of COVID-19 generally takes places via respiratory droplets which are inhaled, or via direct/indirect contacts with other people.<br>(1) Infection via Respiratory Droplets<br>When an infected person coughs or sneezes, the viruses within the droplets (saliva and sputum) are released over a short distance to be inhaled through mouths or nostrils of people in the proximity.<br><br>(2) Infection via Contacts<br>When an infected person covers his/her mouth at coughing or sneezing with hands and touching objects with those hands, the viruses on the hands may stick on the surface, then others who touched the same objects can be infected through membranes by touching their mouths or noses afterwards. Possible channels of such transmission include hand straps of trains and buses, PCs, doorknobs, |

switches, and buttons. It is known that, although the viruses can enter in the mucous membranes, they can only adhere to healthy skin without entering in it. The viruses on the surface of an object will break down over time. However, some viruses may remain infectious for 24–72 hours depending on materials and types of the surface.

There are high risks of spreading the infection under the following three conditions: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

Even if all three conditions are not met, there are risks associated with congestions and close-range conversations, especially speaking loudly and singing. In addition, vigorous exhalation and exercise with loud voice may have risks of infection.

Currently, the spreads of infections in clusters have occurred usually at live houses, gyms, medical institutions, and restaurants involving reception in downtowns and business areas. Cautions must be taken always; because there are serious concerns pointed out of infections from asymptomatic persons.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<Basic Infection Prevention Measures>**

Q4-3: How can I avoid catching or spreading the coronavirus?

A4-3: To prevent infection, general measures against the infectious diseases such as washing your hands with soap, using alcohol-based hand sanitizer gel, and ventilation are effective. Health management should also be reminded such as getting enough sleep. It is also effective to avoid touching your mouth and nose with your hands before washing or disinfecting your hands, and to measure and record your body temperature regularly.

Handwashing in running water is effective even without soap, because it can rinse off some contamination including viruses, but handwashing with soap is more effective. When washing your hands, it is important to wash your fingertips, between fingers, wrists, and wrinkles carefully where dirt and viruses tend to remain. Using alcohol-based hand sanitizer gel is an alternative to make viruses noninfectious when soap and running water is not available.

Further, it is important to avoid the three Cs: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

In addition, it is effective to avoid unnecessary and non-urgent outings as well as nighttime visits to bustling downtowns, to keep the social distancing with others, and to adequately ventilate homes and offices.

Finally, it is important to avoid infecting not only yourself but also others by wearing a facemask when going out and by keeping "the cough etiquette" even at home.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<General Matters on Waste Related to COVID-19>**

Q4-4: What kind of waste is discharged with the novel coronavirus disease?

A4-4: Medical institutions and inspection institutes discharge medical equipment and/or materials as infectious waste which are used for diagnoses, treatment, and inspection related to the novel coronavirus disease.
Households and offices discharge tissues and used facemasks as general waste or industrial waste, which contain respiratory secretions (nasal discharge, sputum, and the like) from infected persons.

**<As to Normally Reusable and Recyclable Resource Materials>**

Q4-5: How should recyclable waste as resources be treated such as plastic bottles, cans, bottles, and container packaging, once they are used by those infected or suspected of infection with the novel coronavirus?

A4-5: The viruses on the surface of an object will break down over time, according to the website of Ministry of Health, Labour and Welfare (refer to the website below). However, some viruses may remain infectious for 24-72 hours depending on materials and types of the surface.

Please consider and disseminate the following rules to local residents about handling waste, which is normally recycled and at the same time is used by those who were infected or suspected of infection with the novel coronavirus:
Dispose of plastic bottles, paper containers and packaging, and plastic containers and packaging as

combustible waste; and
Non-combustible materials such as cans and bottles should be disposed of a week after, taking into account that the period of infectivity lasts for approximately 3 days and frequency of collection of recyclable garbage is generally once a week or once in two weeks. When it is difficult, dispose of it as "combustible waste (combustible garbage)", and do not sort the waste any further.

Nevertheless, please request the local residents for cooperation to sort out and recycle items as usual which are used by those who are neither infected nor suspected of infection with the novel coronavirus.

*(Reference) Q & A on Coronavirus Disease 2019 (COVID-19) April 1, 2020 version*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00014.html*

**<Decreased Demand for Recyclable Garbage as Resources>**

Q4-6: How to deal with the stagnant in the recycling process due to the decline in demand for recyclable garbage as recycling resources because of the shrink in factory operation caused by the spread of the novel coronavirus infection?

A4-6: If the recycling process is stagnant due to temporary suspension of acceptance by recycling facilities, consider the followings to ensure proper waste disposal: Secure a new storage space, disseminate a request to the local residents to reduce or refrain from discharging household waste, and change a contractor-and/or a disposal method.

**<Waste composition survey>**

Q4-7: Should waste composition surveys and/or research projects be temporarily suspended which have been conducted usually on household garbage, under the spread of the novel coronavirus infection?

A4-7: Waste composition surveys stated in the notification[*1] may be postponed in a case where waste discharged from household may contain tissues or masks used by a person who is infected or suspected of infection with the novel coronavirus and there is concern about the work environment or infection prevention measures while conducting the survey. Assuming that a survey to be conducted, please take sufficient measures to prevent infection such as proper use of personal protective equipment, washing and sanitizing hands, and gargle after the work, and sanitizing the equipment used for the survey. Refer to A5-5 and 5-6 when conducting actual surveys.

*(Reference) *1 Notification by Environment Control Division Manager, Water Environment Department, Environmental Sanitation Bureau, Ministry of Health and Welfare No. 95 dated November 4, 1977 (in Japanese)*
*http://www.env.go.jp/hourei/11/000013.html*

**<Waste from Patients with Mild or No Symptoms Staying at Temporary Lodging Facilities ①>**

Q4-8: How should waste discharged from temporary lodging facilities be treated where patients stay with mild or no symptoms of the novel coronavirus disease?

A4-8: Since the facility mentioned in this question is not a place for medical or care practices, it is not a facility that discharges infectious waste defined according to the Waste Management and Public Cleaning Act, under which the waste is not required to be treated as infectious waste. However, any appropriate measures should still be taken to prevent infection among workers in the facility and also waste treatment business operators.

It is important to thoroughly implement the infection prevention measures illustrated in "Guidelines for Measures Against New Influenza in Waste Treatment" (refer to A5-5 as well). At the same time, please be reminded of the following specific prevention measures: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

Please note that treating all or majority of the waste in accordance with the treatment of infectious waste may rather increase risk of public health, because it would lead to concentration of waste treatment load on the infectious waste treatment facilities, resulting in stagnant of waste disposal processes. Therefore, reasonable treatment is important considering the stable continuation and maintenance of the waste treatment and management system.

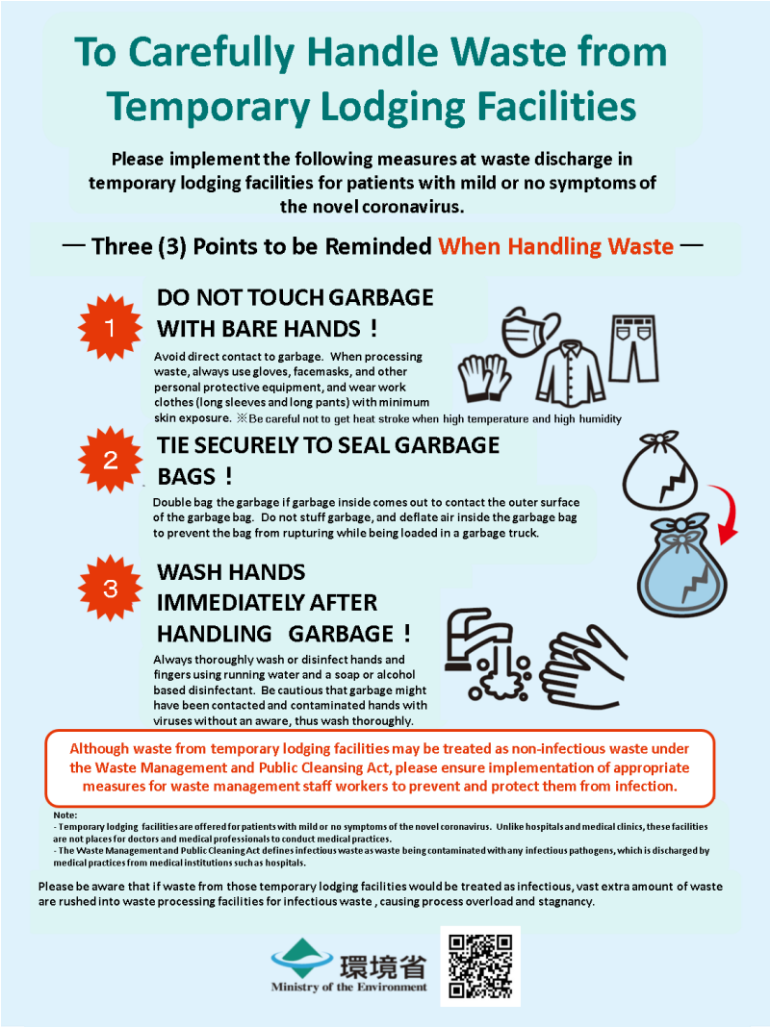
*(Reference Websites from Ministry of Health, Labour and Welfare) Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*https://www.mhlw.go.jp/content/000619458.pdf*

*(Reference) To carefully handle Waste from Temporary Lodging Facilities*

*https://www.env.go.jp/en/recycle/index.html*




*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification)(in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

**<Waste from Patients with Mild or No Symptoms Staying at Temporary Lodging Facilities ②>**

| |
|---|
| Q4-9: Which is a responsible discharger of the waste between a prefectural government and a temporary lodging facility, which is discharged from temporary lodging facilities where patients stay with mild or no symptoms of the novel coronavirus disease? |
| A4-9: A discharger to treat waste from temporary lodging facilities where patients stay with mild or no symptoms of the novel coronavirus disease (hereafter "temporary lodging facilities"), is recognized as a body which is responsible for managing lodging business of those facilities, therefore discharger is usually a prefectural government which manages the business.<br><br>Please note that the temporary lodging facility may be a discharger under certain individual conditions, |

where the lodging facility takes some responsibility to manage the (waste discharge) business, given that roles are explicitly determined between the regional government and the temporary lodging facility.

Even if the regional government is not the waste discharger, the regional government has the responsibility of comprehensively promoting measures against the novel coronavirus in the area and proper waste disposal. So that, the regional government is required to fulfill the responsibilities by considering the followings such as undertaking costs incurred in waste treatment, proposing a way to properly manage the waste, establishing a system for managing the waste, and securing a contractor for the waste treatment.

**< How to Dispose of Household and Office Garbage ①>**

Q4-10: How should I dispose of waste such as tissues used by people who are infected or suspected of infection with the novel coronavirus?

A4-10: Waste related to the novel coronavirus diseases which is discharged from households and offices should be treated according to the "Guidelines for Measures against New Influenza in Waste Treatment", in the same manner as the waste related to the influenza infection.

Specific prevention measures include: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Household Garbage Disposal (To Prevent Spread and Infection of COVID-19)*
*http://www.env.go.jp/saigai/novel_coronavirus_2020/household_garbage_disposal.pdf*


*(Reference) Appropriate Process of Wastes Related to the Novel Coronavirus Infection Disease (Official Notice)*

*(in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

**<How to Dispose of Household and Office Garbage ②>**

Q4-11: Could any advice be provided on whether or not disinfectant solution such as sodium hypochlorite is effective if diffused over the surface of garbage and/or the surface of garbage bags, in order to protect staff workers from infection of the novel coronaviruses derived of garbage discharged from households and temporary lodging facilities where patients are staying?

A4-11: Disinfection against the novel coronaviruses using sodium hypochlorite and/or alcohol solution has been recognized as effective to a certain degree.

However, disinfectant may not be diffused uniformly over the entire surface of garbage or garbage bags, which may result in incomplete disinfection, and may even cause health hazards or risks to those who actually performed the disinfection. For this reason, disinfectant solution should be used by soaking a towel or a cleaning cloth into the solution, to carefully wipe an item.

Therefore, it is dependent on whether or not it is necessary, to wipe the entire surface of garbage bags using the soaked towel and the like, or to double bag the garbage bags, to sufficiently achieve the same effect, when disinfecting the surface of garbage bags.

Most importantly, infection prevention measures are to be thoroughly implemented among staff workers who handle and treat garbage bags, including adequate use of personal protection equipment such as gloves, and disinfection and/or washing hands.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Guidelines for Measures Against New Influenza (Cross-Ministerial Conference on Measures Against the New Influenza and Avian Influenza) (in Japanese)*
*https://www.cas.go.jp/jp/seisaku/ful/keikaku/pdf/h300621gl_guideline.pdf*

*(Reference) Countermeasures to the Novel Coronavirus: Keep Clean Around Oneself (Ministry of Economy, Trade and Industry, and Ministry of Health, Labour and Welfare) (in Japanese)*
*https://www.meti.go.jp/covid-19/pdf/0327_poster.pdf*

*(Reference) Notes for Households in Which a Family Member Might Have been Infected with the Novel Coronavirus (Japanese Society for Infection Prevention and Control) (in Japanese)*
*http://www.kankyokansen.org/uploads/uploads/files/jsipc/dokyokazoku-chuijikou.pdf*

**<How to Dispose Waste from Medical Institutions>**

Q4-12: How should infectious waste be treated which is discharged from medical institutions in relation to the novel coronavirus disease?

A4-12: Infectious Waste related to the novel coronavirus disease discharged from medical institutions should be treated in accordance with the "Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act".

Specifically, when storing infectious waste in an institution, the discharger of medical waste should install a partition in order to prevent the infectious waste from being mixed with other waste, and put

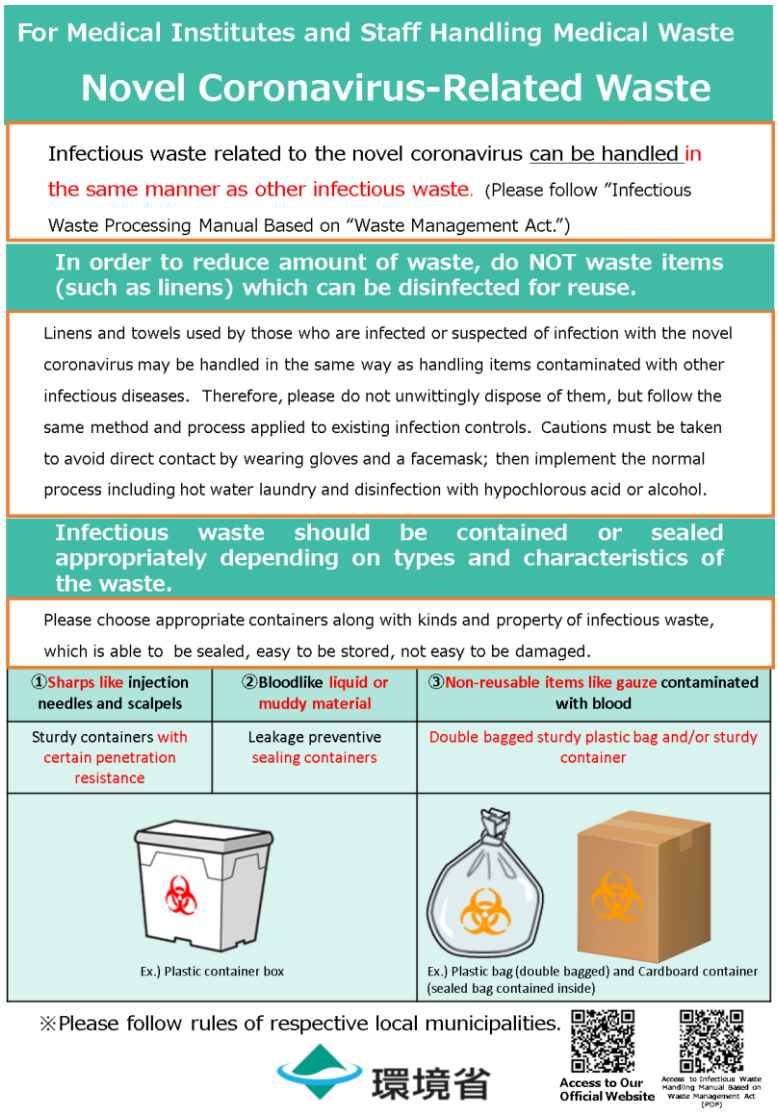
perishable waste in the refrigerator. In addition, when discharging, it is necessary to select an appropriate container according to the type and property of the waste, to put and seal the waste in the container, and to clearly indicate that it contains infectious waste.

*(Reference) Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act (in Japanese)*

*https://www.env.go.jp/recycle/kansen-manual1.pdf*

*(Reference) The Novel Coronavirus-related Waste for Medical Institutes and Stuff Handling Medical Waste,*

*https://www.env.go.jp/en/recycle/index.html*




*(Reference) Appropriate Waste Treatment Related to the Novel Coronavirus Infectious Disease (Official Notification) (in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

**<Measures for Continuing the Waste Management Services ①>**

Q4-13: How should general waste treatment and management business be operated in municipalities under the declaration of a state of emergency?

A4-13: The "Basic Policies for Novel Coronavirus Disease Control" decided by the Novel Coronavirus Response Headquarters defines waste disposal services as services which are required to continue business operation even under the declaration of a state of emergency. Therefore, the waste treatment and management business is to undertake services that are indispensable to secure stable lives and economy of the people of Japan.

For this reason, please continue business operation in accordance with the "Guidelines for Measures against New Influenza in Waste Treatment" while taking sufficient measures against infection, in order to properly and stably treat and process waste regardless of whether or not the waste is related to the novel coronavirus disease, based on diligent consideration on integrated responsibilities to treat and process general waste.

Please refer to A4-14 for measures in a case the novel coronavirus infection disease occurs at a workplace and affects service continuity at a considerable degree.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference)*
*Basic Policies for Novel Coronavirus Disease Control by the Government of Japan (Summary), March 28, 2020 (Revised on May 21, 2020)*
*https://www.mhlw.go.jp/content/10900000/000632651.pdf*

*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification)(in Japanese)*
*http://www.env.go.jp/recycle/200407.pdf*

**<Measures for Continuing the Waste Management Services ②>**

Q4-14: Specifically what should local municipalities and regional governments do or consider in order to continuously operate the waste management business?

A4-14: It is important to thoroughly implement the infection prevention measures illustrated in A5-5, to secure the materials that are essential for continuation of the waste management services including facility operation, and to determine real needs of materials for the operation.

Make a business continuity plan in advance, thoroughly discussing with people involved such as contractors, licensed companies, other businesses, surrounding municipalities, etc. The plan should be included followings:

・What to do when workers are infected with the coronavirus, and a waste management work is difficult to continue the service in a whole business or an office level;

・For the situation of the lack in workers and materials, the plan to reduce work step by step considering the priority of the works.

*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification)(in Japanese)*

*http://www.env.go.jp/recycle/200407.pdf*

**<Measures for Continuing the Waste Management Services ③>**

Q4-15: Under the declaration of a state of emergency, do the waste management works in local governments need to reduce the number of workers on the job by 70 – 80%?

A4-15: As waste management business is to undertake services that are indispensable to secure stable lives and economy of the people of Japan, please make sure to continue the services in accordance with the "Guidelines for Measures against New Influenza in Waste Treatment" while taking sufficient measures against infection, in order to properly and stably treat and process waste regardless of whether or not the waste is related to the novel coronavirus disease, based on diligent consideration on integrated responsibilities to treat and process general waste.

On the premise of implementing the above, please proceed with efforts to reduce the number of employees working at offices to a possible extent by, ideally, 70%.

## 【5. For Waste Management Business Operators】

### <General Knowledge on the Novel Coronavirus>

| Q5-1: What is “the novel coronavirus”, and how does it differ from other viruses? |
|---|
| A5-1: The novel coronavirus（SARS-CoV-2） is a type of coronaviruses including those causing normal colds, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS). Among other viruses, coronaviruses are categorized as a type of virus with RNA as genetic information (a single-stranded RNA virus), and has a double membrane made of lipid called ″envelope″ at the outermost part of a virus particle. Although it cannot reproduce itself, it can replicate by adhering to and entering into cells such as mucous membranes.<br><br>*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*<br>*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html* |

### <Transmission Routes of the Novel Coronavirus Infectious Disease (COVID-19)>

| Q5-2: How does human-to-human transmission of COVID-19 occur? |
|---|
| A5-2: Infection of COVID-19 generally takes places via respiratory droplets which are inhaled, or via direct/indirect contacts with other people.<br>(1) Infection via Respiratory Droplets<br>When an infected person coughs or sneezes, the viruses within the droplets (saliva and sputum) are released over a short distance to be inhaled through mouths or nostrils of people in the proximity.<br><br>(2) Infection via Contacts<br>When an infected person covers his/her mouth at coughing or sneezing with hands and touching objects with those hands, the viruses on the hands may stick on the surface, then others who touched the same objects can be infected through membranes by touching their mouths or noses afterwards. Possible channels of such transmission include hand straps of trains and buses, PCs, doorknobs, switches, and buttons. It is known that, although the viruses can enter in the mucous membranes, they can only adhere to healthy skin without entering in it. The viruses on the surface of an object will break down over time. However, some viruses may remain infectious for 24-72 hours depending on materials and types of the surface.<br><br>There are high risks of spreading the infection under the following three conditions: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.<br><br>Even if all three conditions are not met, there are risks associated with congestions and close-range |

conversations, especially speaking loudly and singing. In addition, vigorous exhalation and exercise with loud voice may have risks of infection.

Currently, the spreads of infections in clusters have occurred usually at live houses, gyms, medical institutions, and restaurants involving reception in downtowns and business areas. Cautions must be taken always; because there are serious concerns pointed out of infections from asymptomatic persons.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<Basic Infection Prevention Measures>**

Q5-3: How can I avoid catching or spreading the coronavirus in daily lives?

A5-3: To prevent infection, general measures against the infectious diseases such as washing your hands with soap, using alcohol-based hand sanitizer gel, and ventilation are effective. Health management should also be reminded such as getting enough sleep. It is also effective to avoid touching your mouth and nose with your hands before washing or disinfecting your hands, and to measure and record your body temperature regularly.

Handwashing in running water is effective even without soap, because it can rinse off some contamination including viruses, but handwashing with soap is more effective. When washing your hands, it is important to wash your fingertips, between fingers, wrists, and wrinkles carefully where dirt and viruses tend to remain. Using alcohol-based hand sanitizer gel is an alternative to make viruses noninfectious when soap and running water is not available.

Further, it is important to avoid the three Cs: ①Closed spaces with poor ventilation, ②Crowded places with many people nearby, and ③Close-contact settings such as close-range conversations.

In addition, it is effective to avoid unnecessary and non-urgent outings as well as nighttime visits to bustling downtowns, to keep the social distancing with others, and to adequately ventilate homes and offices.

Finally, it is important to avoid infecting not only yourself but also others by wearing a facemask when going out and by keeping "the cough etiquette" even at home.

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from the Minister's Office) Guidelines to Avoid the Three "Cs"*
*https://www.kantei.go.jp/jp/content/000061935.pdf*

**<General Matters on Waste Related to COVID-19>**

Q5-4: What kind of waste is discharged with the novel coronavirus disease?

A5-4: Medical institutions and inspection institutes discharge medical equipment and/or materials as infectious waste which are used for diagnoses, treatment, and inspection related to the novel coronavirus disease.

Households and offices discharge tissues and used facemasks as general waste or industrial waste, which contain respiratory secretions (nasal discharge, sputum, and the like) from infected persons.

**<Infection Prevention Measures in Waste Treatment and Management Process>**

Q5-5: What infection prevention measures can be suggested for those engaged in treating and managing waste?

A5-5: Each worker is to always implement the infection prevention measures illustrated in A5-3, such as washing your hands, not touching your face before handwashing, health management, regular measurement of body temperature, avoiding "the three Cs", refraining from unnecessary outings, indoor ventilation, and preventing infection from others by wearing facemasks and coughing etiquette.

On the premise of implementing the above, please make sure to apply the followings described in "Guidelines for Measures Against New Influenza in Waste Treatment".
Use gloves, masks, other personal protective equipment, and wear work clothes (long sleeves and pants, for example) with less skin exposure when working in contact with waste such as collecting, transporting, manually sorting waste, and maneuvering heavy equipment with which the driver's seat is exposed to the worksite.
Wash and disinfect hands every time immediately after work
Clean waste transporting vehicles and related facilities regularly, and disinfect them with 0.05% sodium hypochlorite and/or 70% alcohol solution.

In addition, please be reminded to avoid the "three Cs" among employees, including morning meetings, breaks, change of clothes and transportation by vehicles, all of which are known as activities prone to infection (crowding, proximity conversation, and the like). At the same time, avoid actions that

could cause contact infection such as touching or sharing the same object with others

For office sections, please minimize person-to-person contacts to a possible extent through remote works, works with staggered and/or flexible working hours, and commute by bicycle. Even at a waste treatment and management worksite, please take as much effort as possible to prevent simultaneous infection, by introducing work rotation or shift work ( two-shift system, for example)

Further, in order to prevent cluster formation, such measures may be considered as that an employee may be required of staying home who has experienced close contacts with a family member who was diagnosed as positive of the novel coronavirus disease.

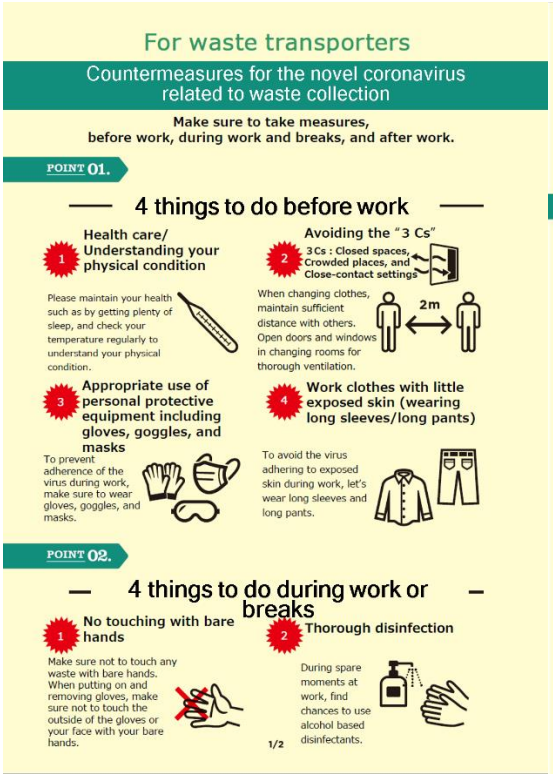
Please note that the revised Health Promotion Act has been fully enforced since this April to prevent unwanted passive smoking, and indoor smoking has been prohibited in principle. Please refrain from conversing with others and talking on a mobile phone as the distance between people may have to be close in an outdoor smoking area or an indoor smoking room.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference Website from Ministry of Health, Labour and Welfare) Q & A about the Novel Coronavirus Disease (for General Public) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/dengue_fever_qa_00001.html*

*(Reference Website from Ministry of Health, Labour and Welfare) Measures to Prevent Passive Smoking*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000189195.html*

*(Reference) Countermeasures to the novel coronavirus related to waste collection.*
*https://www.env.go.jp/en/recycle/index.html*




## <Precautions When Using Personal Protective Equipment>

| Q5-6: What are the precautions when using personal protective equipment? |
|---|
| A5-6: The guide for medical institutions also states that the following two points are essential to prevent infection via different infection transmission routes: "preventing droplets with virus from adhering to mucous membranes of eyes, nose and mouth" and "preventing hands contaminated with viruses from contacting mucous membranes". It can be effective to use personal protective equipment for both purposes of protecting the mucous membrane of the face and keeping the hands clean. These two purposes should be taken into consideration to decide whether or not to use personal protective equipment such as gloves and masks. Eye protections (such as goggles, face shields, and eye protection that can prevent droplets from directly entering into an eye) are also suggested to be effective as "additional personal protective equipment".<br><br>Moreover, even while wearing personal protective equipment, cautions should be taken to avoid touching outer surface of the protective equipment and mucous membranes of the face with bare hands. Specifically, when undressing, take off clothes while turning them inside out. Before removing personal protective equipment such as a facemask, please wash hands with a soap and/or disinfect the hands. After removing protective equipment, wash or disinfect the hands again before touching the face or any parts where viruses are unlikely adhered. Wash the face afterwards as necessary. As described, attention should be paid to adequately arrange the order of respective actions. |

In addition, it is also important to store personal protective equipment in a bag to prevent the virus from adhering to it when not in use.

Please reduce frequency and/or amount of use of personal protective equipment at a reasonable degree which is expected to be difficult to maintain stable supply in the long term due to the spread of the novel coronavirus infection. Please attempt further saving of personal protective equipment, considering mitigated measures to reduce frequency of inspections, requiring the use of the equipment, according to relevant laws and regulations.

*(Reference) Guidance for Medical Institutions to the Novel Coronavirus Infection Disease (Japanese Society for Infection Prevention and Control) (in Japanese)*
*http://www.kankyokansen.org/modules/news/index.php?content_id=343*

*(Reference) Thorough Saving of Use of Protective Clothing in Facility Inspection and Functional Inspection of Waste Processing Facilities (Official Notice) (in Japanese)*
*http://www.env.go.jp/recycle/200410.pdf*

**<Measures for Continuing the Waste Management Services ①>**

Q5-7: What and how should waste management business operators proceed with business under the declaration of a state of emergency? May those business operators have to continue business operation or not?

A5-7: The "Basic Policies for Novel Coronavirus Disease Control" decided by the Novel Coronavirus Response Headquarters defines waste disposal services as services which are required to continue business operation even under the declaration of a state of emergency. Therefore, the waste treatment and management business is to undertake services that are indispensable to secure stable lives and economy of the people of Japan.

For this reason, please continue business operation in accordance with the "Guidelines for Measures against New Influenza in Waste Treatment" while taking sufficient measures against infection, in order to properly and stably treat and process waste regardless of whether or not the waste is related to the novel coronavirus disease.

Please refer to A5-8 for measures in a case the novel coronavirus infection disease occurs at a workplace and affects service continuity at a considerable degree.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Basic Policies for Novel Coronavirus Disease Control by the Government of Japan (Summary), March 28, 2020 (Revised on May 21, 2020)*
*https://www.mhlw.go.jp/content/10900000/000632651.pdf*

*(Reference) Facilitating Process of Waste Related to the Novel Coronavirus Infectious Disease under the Declaration of a State of Emergency (Official Notification)(in Japanese)*
*http://www.env.go.jp/recycle/200407.pdf*

**<Measures for Continuing the Waste Management Services ②>**

Q5-8: What should I do and what should I consider in order to continue the waste management works?

A5-8: It is important to thoroughly implement the infection prevention measures illustrated in A5-5, to secure the materials that are essential for continuation of the waste management services including facility operation, and to determine real needs of materials for the operation.

Make a business continuity plan in advance, thoroughly discussing with people involved such as contractors, licensed companies, other businesses, etc. The plan should be included followings:
・What to do when workers are infected with the coronavirus, and a waste management work is difficult to continue the service in a whole business or an office level;
・For the situation of the lack in workers and materials, the plan to reduce work step by step considering the priority of the works.

**<Measures for Continuing the Waste Management Services ③>**

Q5-9: Under the declaration of a state of emergency, do the waste management works need to reduce the number of workers on the job by 70 – 80%?

A5-9: As waste management business is to undertake services that are indispensable to secure stable lives and economy of the people of Japan, please make sure to continue the services in accordance with the "Guidelines for Measures against New Influenza in Waste Treatment" while taking sufficient measures against infection, in order to properly and stably treat and process waste regardless of whether or not the waste is related to the novel coronavirus disease.

On the premise of implementing the above, please proceed with efforts to reduce the number of employees working at offices to a possible extent by, ideally, 70%

<Support for Financial Management>

Q5-10: Operation and management have been seriously affected under the situation with the novel coronavirus, especially in terms of finance and business continuity, because contracts so as the amount of waste received have significantly reduced. Could you provide with information on any available financial support measures?

A5-10: No. 4 Safety Nets for Financing Guarantee* were effected as a financial support for small and medium-sized enterprises having been affected from the economic situation with the novel coronavirus disease. Moreover, No. 5 Safety Nets for Financing Guarantee cover the following business fields as subject to support: human excreta waste collection and transportation, human excreta waste treatment and disposal, septic tank cleaning, septic tank maintenance, garbage collection and transportation, garbage treatment and disposal, industrial waste collection and transportation, industrial waste treatment and disposal, special management industrial waste collection and transportation and special management industrial waste treatment and disposal. If concerned about financial management, please consult a local private financial institution or credit guarantee association to receive the supports described above.

There are other support measures and emergency economic measures, too, which have been offered to maintain employment and continue businesses. Please refer to the following URLs to access webpages of respective ministries and agencies for details.

** Regulatory system(s) in which a credit guarantee association guarantees full or some portion of loan amount separately from general warranty, as a financial management support measure for SMEs and small/micro business operators.*

*(Reference) Measures to Protect Living and Employment (Prime Minister's Office) (in Japanese)*
*https://www.kantei.go.jp/jp/pages/coronavirus_shien.html*

*(Reference) METI's Support Measures for Companies Concerning the Impacts of the Novel Coronavirus Disease (Ministry of Economy, Trade and Industry)*
*https://www.meti.go.jp/english/covid-19/index.html*

*(Reference) Novel Coronavirus Infection Disease: Please Look in - Useful Information (Prime Minister's Office) (in Japanese)*
*https://www.kantei.go.jp/jp/pages/coronavirus_index.html*

*(Reference) Employment Adjustment Subsidy (Ministry of Health, Labour and Welfare) (in Japanese)*
*https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/koyou_roudou/koyou/kyufukin/pageL07.html*

*(Reference) Tax Payment Consultation (National Tax Agency) (in Japanese)*

*https://www.nta.go.jp/taxes/nozei/nofu_konnan.html*

**<Support for Introduction of Remote Work>**

Q5-11: Are there any available support measures for those business operators considering remote works in order to adapt to the situation with the novel coronavirus?

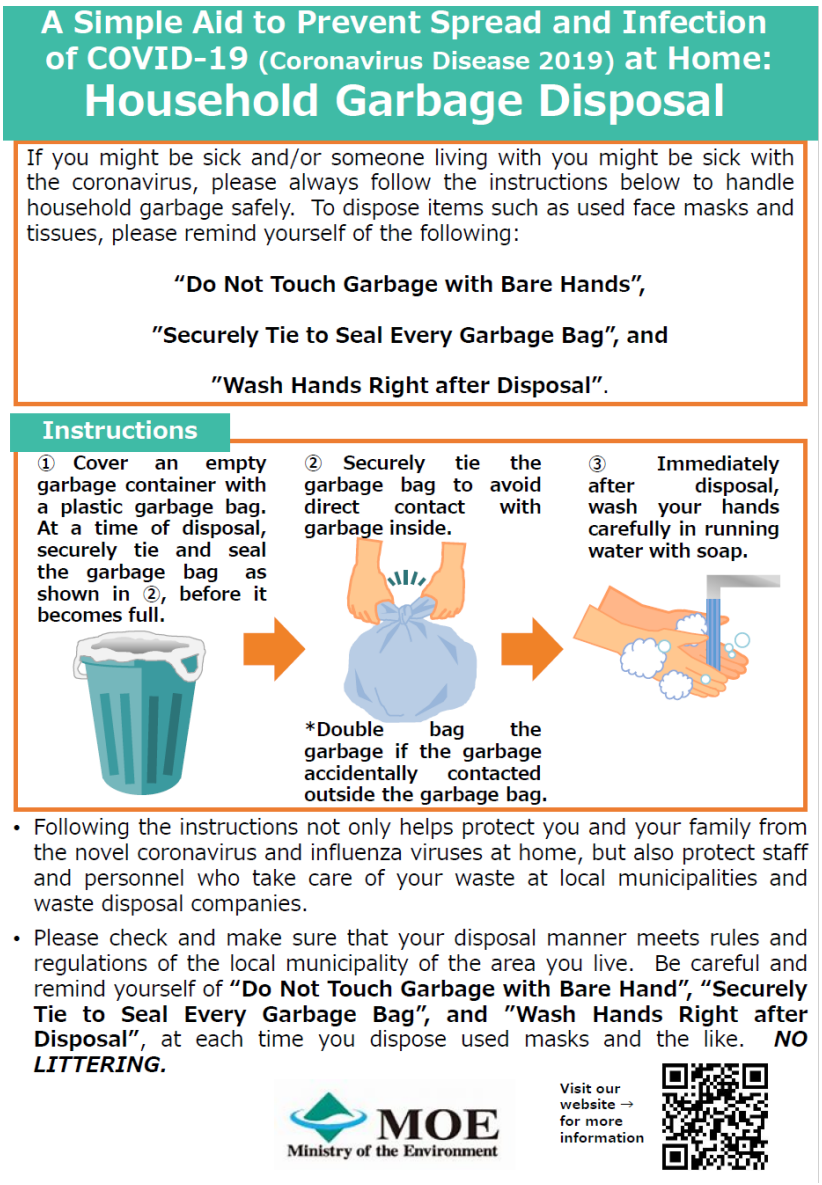
A5-11 Please consult the General Incorporated Association Service Design Engineering Council and consider the IT Introduction subsidy, which is available for small and medium enterprises (SMEs) to newly introduce remote work systems and hence employing work efficiency tools to be used for remote works.

*(Reference) METI's Support Measures for Companies Concerning the Impacts of the Novel Coronavirus Disease*

*https://www.meti.go.jp/english/covid-19/index.html*

**< How to Dispose of Household and Office Garbage ①>**

| Q5-12: How should I dispose of waste such as tissues used by people who are infected or suspected of infection with the novel coronavirus? |
|---|
| A5-12: Waste related to the novel coronavirus diseases which is discharged from households and offices should be treated according to the "Guidelines for Measures against New Influenza in Waste Treatment", in the same manner as the waste related to the influenza infection.<br><br>Specific prevention measures include: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.<br><br>*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*<br>*http://www.env.go.jp/recycle/misc/new-flu/index.html*<br><br>*(Reference) Household Garbage Disposal (To Prevent Spread and Infection of COVID-19)*<br>*http://www.env.go.jp/saigai/novel_coronavirus_2020/household_garbage_disposal.pdf* |




*(Reference) Appropriate Process of Wastes Related to the Novel Coronavirus Infection Disease (Official Notice)*

*(in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

**<How to Dispose of Household and Office Garbage ②>**

Q5-13: Could any advice be provided on whether or not disinfectant solution such as sodium hypochlorite is effective if diffused over the surface of garbage and/or the surface of garbage bags, in order to protect staff workers from infection of the novel coronaviruses derived of garbage discharged from households and temporary lodging facilities where patients are staying?

A5-13: Disinfection against the novel coronaviruses using sodium hypochlorite and/or alcohol solution has been recognized as effective to a certain degree.

However, disinfectant may not be diffused uniformly over the entire surface of garbage or garbage bags, which may result in incomplete disinfection, and may even cause health hazards or risks to those who actually performed the disinfection. For this reason, disinfectant solution should be used by soaking a towel or a cleaning cloth into the solution, to carefully wipe an item.

Therefore, it is dependent on whether or not it is necessary, to wipe the entire surface of garbage bags using the soaked towel and the like, or to double bag the garbage bags, to sufficiently achieve the same effect, when disinfecting the surface of garbage bags.

Most importantly, infection prevention measures are to be thoroughly implemented among staff workers who handle and treat garbage bags, including adequate use of personal protection equipment such as gloves, and disinfection and/or washing hands.

*(Reference) Guidelines for Measures against New Influenza in Waste Treatment (in Japanese)*
*http://www.env.go.jp/recycle/misc/new-flu/index.html*

*(Reference) Guidelines for Measures Against New Influenza (Cross-Ministerial Conference on Measures Against the New Influenza and Avian Influenza) (in Japanese)*
*https://www.cas.go.jp/jp/seisaku/ful/keikaku/pdf/h300621gl_guideline.pdf*

*(Reference) Countermeasures to the Novel Coronavirus: Keep Clean Around Oneself (Ministry of Economy, Trade and Industry, and Ministry of Health, Labour and Welfare) (in Japanese)*
*https://www.meti.go.jp/covid-19/pdf/0327_poster.pdf*

*(Reference) Notes for Households in Which a Family Member Might Have been Infected with the Novel Coronavirus (Japanese Society for Infection Prevention and Control) (in Japanese)*
*http://www.kankyokansen.org/uploads/uploads/files/jsipc/dokyokazoku-chuijikou.pdf*

**<How to Dispose Waste from Medical Institutions>**

Q5-14: How should infectious waste be treated which is discharged from medical institutions in relation to the novel coronavirus disease?

A5-14: Infectious Waste related to the novel coronavirus disease discharged from medical institutions should be treated in accordance with the "Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act".

Specifically, when storing infectious waste in an institution, the discharger of medical waste should install a partition in order to prevent the infectious waste from being mixed with other waste, and put

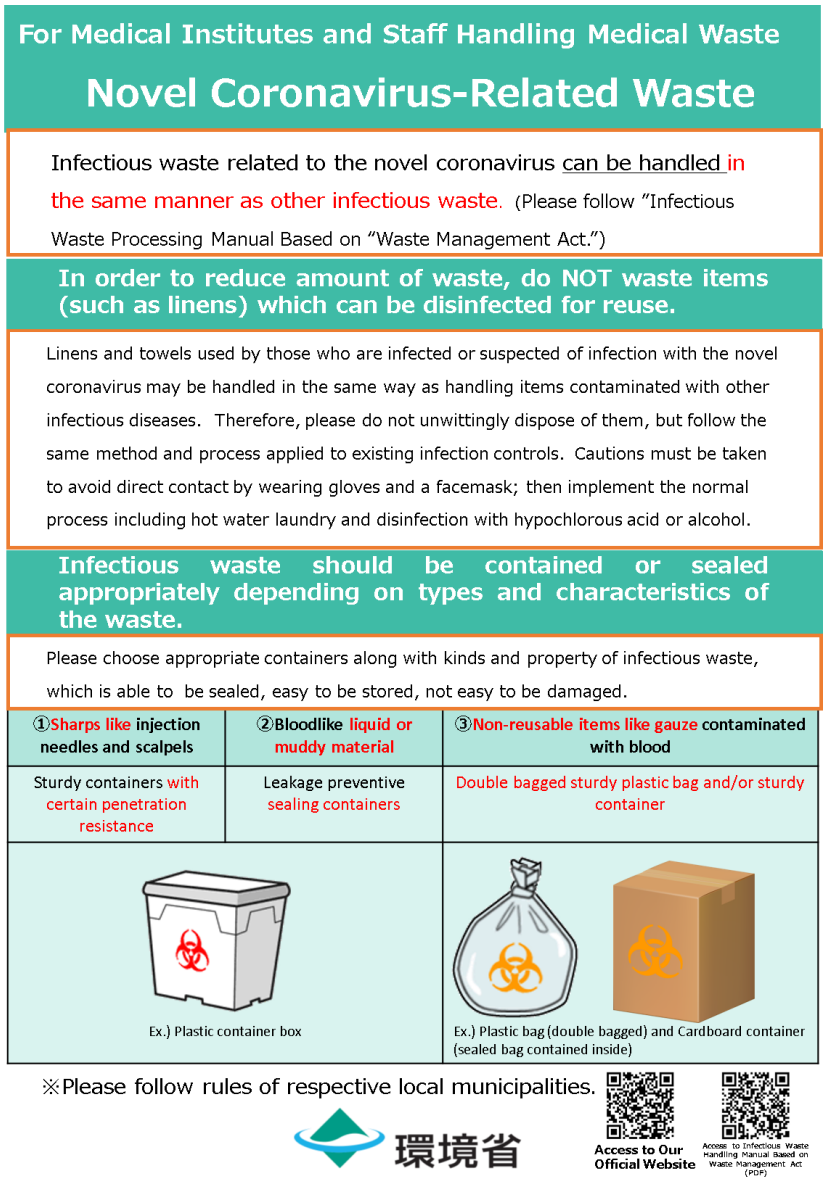
perishable waste in the refrigerator. In addition, when discharging, it is necessary to select an appropriate container according to the type and property of the waste, to put and seal the waste in the container, and to clearly indicate that it contains infectious waste.

*(Reference) Infectious Waste Treatment Manual under the Waste Management and Public Cleaning Act (in Japanese)*

*https://www.env.go.jp/recycle/kansen-manual1.pdf*

*(Reference) The Novel Coronavirus-related Waste for Medical Institutes and Stuff Handling Medical Waste,*

*https://www.env.go.jp/en/recycle/index.html*




*(Reference) Appropriate Waste Treatment Related to the Novel Coronavirus Infectious Disease (Official Notification) (in Japanese)*

*http://www.env.go.jp/recycle/200304.pdf*

**<Waste from Patients with Mild or No Symptoms Staying at Temporary Lodging Facilities>**

Q5-15: How should waste discharged from temporary lodging facilities be treated where patients stay with mild or no symptoms of the novel coronavirus disease?

A5-15: Since the facility mentioned in this question is not a place for medical or care practices, it is not a facility that discharges infectious waste defined according to the Waste Management and Public Cleaning Act, under which the waste is not required to be treated as infectious waste. However, any appropriate measures should still be taken to prevent infection among workers in the facility and also waste treatment business operators.

It is important to thoroughly implement the infection prevention measures illustrated in "Guidelines for Measures Against New Influenza in Waste Treatment" (refer to A5-5 as well). At the same time, please be reminded of the following specific prevention measures: do not touch garbage directly; dispose of garbage before a garbage bag becomes full, and securely tie garbage bags; and wash your hands with soap immediately after the disposal. Moreover, it is effective to double bag the garbage, if it becomes necessary to improve sealing because the garbage contacts the outer surface of the bag, because the knot to seal the garbage is loose, and/or because the bag is torn.

Please note that treating all or majority of the waste in accordance with the treatment of infectious waste may rather increase risk of public health, because it would lead to concentration of waste treatment load on the infectious waste treatment facilities, resulting in stagnant of waste disposal processes. Therefore, reasonable treatment is important considering the stable continuation and maintenance of the waste treatment and management system.

*(Reference Websites from Ministry of Health, Labour and Welfare) Lodging and Care Manual for Patients with Mild Symptoms of the Novel Coronavirus Infection Disease (in Japanese)*

*https://www.mhlw.go.jp/content/000618526.pdf*

*https://www.mhlw.go.jp/content/000619458.pdf*

*(Reference) To carefully handle Waste from Temporary Lodging Facilities*

*https://www.env.go.jp/en/recycle/index.html*

**<Use of Alcohol Detector>**

Q5-16: What are the precautions to prevent the infection of the novel coronavirus disease when using alcohol detectors which are used for safe driving?

A5-16: I Infection with the novel coronavirus via use of alcohol detectors can be prevented by avoiding direct contact between users, such as changing the straw for each user. Further measures should be

considered such as avoiding multiple users to use the same detector. In addition, please note the following points to prevent misdetection of alcohol detectors.
Ventilate well before using the alcohol detector, or use a detector in a well-ventilated environment.
As alcohol-based hand sanitizer solution contains highly concentrated alcohol, especially gel type alcohol may take some time for alcohol on hands to be completely dried. Therefore, please wash your hands thoroughly with a soap before using the detector.
Sanitizers, disinfectants, and cleaners containing alcohol should be placed away from the alcohol detector.
Please contact the manufacturer of the detector to learn the proper method to disinfect the alcohol detector before actually disinfecting the detector. Highly-concentrated alcohol and/or hypochlorous acid disinfectant may damage the detector (sensor), causing reduced durability and accuracy, or even malfunctioning. It should also be noted that alcohol detectors have different device characteristics depending on manufacturers.

*(Reference) Handling Alcohol Detectors under Implementation of the Measures on the Novel Coronavirus Infection Disease (Ministry of Land, Infrastructure, Transport and Tourism, Dated April 24, 2020 via Office Contact) (in Japanese)*
*http://www.mlit.go.jp/jidosha/anzen/special/data/sp20200424.pdf*

*(Reference) Notes to Use of Alcohol Detectors Corresponding to the Measures on the Novel Coronavirus (Japan Breath Alcohol Testing Consortium) (in Japanese)*
*https://j-bac.org/topics/2020/95195/*

*(Reference) Effects of Alcohol Disinfectant Solution on Alcohol Detectors (Japan Breath Alcohol Testing Consortium) (in Japanese)*
*https://j-bac.org/files/files20200317130408.pdf*